

Appl. No. 10/620,127  
Response dated July 7, 2004  
Reply to Office Action of April 7, 2004

### REMARKS/ARGUMENTS

Applicants respectfully request reconsideration of this application. Claims 1-8 and 21-28 remain in the application. Of these, claims 1 and 3-8 stand rejected, claim 2 stands withdrawn, and claims 21-28 are newly presented.

Claims 9-20 have been canceled, without prejudice, as a result of the Examiner's restriction requirement.

#### 1. Oath/Declaration

The Examiner indicates the Inventor's Declaration is defective as a result of typographical errors being found therein.

Applicants have reviewed their Declaration and can find no such typographical errors. Therefore, no correction is being made. A copy of the Inventor's Declaration is attached hereto as Exhibit A.

#### 2. Rejection of Claims 1, 3 and 4 Under 35 USC 102(b)

Claims 1, 3 and 4 stand rejected under 35 USC 102(b) as being anticipated by Goenka et al. (US Pat. No. 6,248,247; hereinafter "Goenka").

The Examiner seems to downplay the product-by-process limitations of applicants' claim 1. Specifically, the Examiner cites MPEP §2113 and §2173.05(p) for the proposition that, "A process limitation cannot serve to patentably distinguish the product over the prior art, in the case that the product is the same, or obvious over, the prior art." See Examiner's Office Action. However, MPEP §2113 actually states:

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art,

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especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding "interbonded by interfusion" to limit structure of the claimed composite and noting that terms such as "welded," "intermixed," "ground in place," "press fitted," and "etched" are capable of construction as structural limitations.).

In applicants' claim 1, a sacrificial material is thermally decomposed to leave a "crossover circuit trace" crossing over "one or more circuit components". Unlike Goenka's sacrificial material, part of which is *etched* away, and part of which remains to provide supporting "pedestals 16" for an upper circuit trace, applicants' sacrificial material is *thermally decomposed*. In this manner, applicants can precisely define the cross-section of an air bridge, and can avoid a random process that produces "hourglass" pedestals 16 of somewhat unknown dimensions.

Applicants' claim 1 is believed to be allowable for at least the above reason. Applicants' claims 3 and 4 are believed to be allowable at least for the reason that they depend from claim 1.

If applicants' claim 1 is allowed, applicants request the reinstatement and allowance of claim 2 (which stands withdrawn as being drawn to a non-examined species).

### 3. Rejection of Claims 5-8 Under 35 USC 103(a)

Claims 5-8 stand rejected under 35 USC 103(a) as being unpatentable over Goenka, as applied to claims 1, 3, and 4 above, in view of Middlehurst et. al. (US Pat. No. 6,604,967; hereinafter "Middlehurst") and Leigh et. al. (US Pat. No. 5,986,893; hereinafter "Leigh").

Applicant believes claims 5-8 are allowable at least for the reason that they depend from an allowable claim 1, and because Middlehurst and Leigh fail to disclose the limitations of parent claim 1 (see previous argument, *supra*).

Appl. No. 10/620,127  
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4. New Claims 21-27

Claims 21 – 27 are newly presented. Support for claim 21 is found, at least, in FIGS. 2 and 3. Applicants' claim 21 recites an additional novelty over Goenka. That is, the novelty that the "crossover circuit trace" is "directly supported by the substrate on opposite sides of the sacrificial material". In Goenka, the crossover circuit trace is fully supported by the remaining "pedestals" of sacrificial material. Claim 21 is therefore believed to be additionally allowable over Goenka. Claims 22-28 are believed to be allowable at least for the reason that they depend from claim 21.

5. Conclusion

Given the above Amendment and Remarks, applicants respectfully request the issuance of a Notice of Allowance.

Respectfully submitted,  
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